CLAIM AMENDMENTS

1. (Currently Amended) A semiconductor device fabricating method comprising:

an amorphous silicon laminating process for forming an amorphous silicon film ~~(2)~~ on a substrate ~~(1)~~;

an irradiation process for irradiating said amorphous silicon film ~~(2)~~ with laser light ~~(16)~~ to transform at least a part of said amorphous silicon film ~~(2)~~ into a polycrystalline silicon film ~~(3)~~; and

an oxidation process for oxidizing the surface of said polycrystalline silicon film ~~(3)~~ in an atmosphere including oxygen, after said irradiation process, wherein

said laser light ~~(16)~~ is a linear beam having an energy-density gradient of 3 $(mJ/cm^2)/\mu m$ or more in the widthwise direction, and said linear beam is generated by transforming pulse laser light with a wavelength in a range between 350 nm or more and 800 nm or less, and

said oxidation process is performed in an atmosphere of saturated water vapor under a pressure of 10 atmospheric pressures or more and at a temperature in a range between 500°C or more and 650°C or less.

2. (Currently Amended) The semiconductor device fabricating method according to claim 1, comprising a process for further laminating silicon oxide, by a chemical vapor deposition method, on the upper surface of said polycrystalline silicon film ~~(3)~~ which has been oxidized in said oxidation process.

3. (Currently Amended) The semiconductor device fabricating method according to claim 1 ~~or 2~~, wherein, in said irradiation process, said amorphous silicon film ~~(2)~~ is irradiated with said laser light ~~(16)~~ such that said widthwise direction is parallel to the direction connecting a source region and a drain region in a thin film transistor to be fabricated.

4. (New) The semiconductor device fabricating method according to claim 2, wherein, in said irradiation process, said amorphous silicon film is irradiated with said laser light such that said widthwise direction is parallel to the direction connecting a source region and a drain region in a thin film transistor to be fabricated.

5. (New) A method of fabricating a semiconductor device, the method comprising:

forming an amorphous silicon film on a substrate;

irradiating said amorphous silicon film with laser light to transform at least a part of said amorphous silicon film into a polycrystalline silicon film; and

oxidizing said polycrystalline silicon film in an ambient including oxygen, after the irradiation, wherein

the laser light is a linear beam having an energy-density gradient of at least 3 $(mJ/cm^2)/\mu m$ in a widthwise direction, and including generating the linear beam by transforming pulsed laser light having a wavelength in a range between 350 nm and 800 nm, and

the oxidizing is performed in a saturated water vapor ambient at a pressure of at least 10 atmospheres and at a temperature in a range between 500°C and 650°C.

6. (New) The method according to claim 5, comprising depositing a film of silicon oxide, by chemical vapor deposition, on said polycrystalline silicon film after the oxidizing.

7. (New) The method according to claim 5, including irradiating said amorphous silicon film with the laser light so that the widthwise direction is parallel to a direction connecting a source region and a drain region in a thin film transistor to be fabricated in the polycrystalline silicon film.

8. (New) The method according to claim 6, including irradiating said amorphous silicon film with the laser light so that the widthwise direction is parallel to a direction connecting a source region and a drain region in a thin film transistor to be fabricated in the polycrystalline silicon film.